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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/725,934  | 12/03/2003  | In Hee Han           | K-0588              | 4486             |
| 34610   | 7590        | 06/02/2006           | EXAMINER            |                  |
| FLESHNER & KIM, LLP<br>P.O. BOX 221200<br>CHANTILLY, VA 20153 |             |                      |                     | PRICE, CARL D    |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 3749  |             |                      |                     |                  |

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |  |
|------------------------------|-----------------|--------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |  |
|                              | 10/725,934      | HAN ET AL.   |  |
|                              | Examiner        | Art Unit     |  |
|                              | CARL D. PRICE   | 3749         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02/28/2006.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3,8,9,14-18 and 20 is/are rejected.  
 7) Claim(s) 4-7,10-13 and 19 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 30 December 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### **Response to Arguments**

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended the claims to be of a scope not previously considered. Consistent with applicant's argument that the prior art relied on in the previous office action fail to show, disclose and/or teach certain aspects of applicant's invention now recited in the claims filed on 02/28/2006, applicant has amended the claims to include, for example, the following:

- the flame holder comprising an annular hub having a center flame hole and a plurality of outer wings radiating from the annular hub.

The prior art references of **US000700714 (Bray)** and **US003198238 (Hughes)** are now relied on to address the above noted limitations of the flame holder. See below.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims: Rejected under 35 U.S.C. 102(b)**

Claims 1, 2, 3, 15, 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US003198238 (Hughes)**.

In the claims the term "laundry dryer" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the claims the recitation "laundry dryer", and "inclined at a predetermined angle upward" (claim 15) are deemed recitations of the intended use. A recitation of the intended use a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

In regard to claims 1, 2, 3, 15, 16 and 17, **US003198238 (Hughes)** shows a means for supplying gas including a gas nozzle (36), mixing pipe (15), primary air inlet (24) and a flame holder (32) disposed at the outlet of the mixing pipe for separating the gas-air mixture into plural streams. The flame holder of **US003198238 (Hughes)** includes an annular hub having a center flame hole (32) and a plurality of outer wings (34) radiating from the annular hub.

Regarding claims **2**, **US003198238 (Hughes)** includes an igniter (31) disposed adjacent the outlet of the mixing pipe.

Regarding claim **3**, the spaces between the wings (34) of **US003198238 (Hughes)** define a plurality of outer flame holes in the manner broadly claimed.

Regarding claim **17**, the fuel supply line of **US003198238 (Hughes)** would, by necessity, have associated therewith a valve for controlling the gas flow, at least in a manner to permit and prevent gas flow during, for example, maintenance and installation of the burner. Therefore, while not shown, **US003198238 (Hughes)** would either necessarily include gas control valve. Or, it would have been obvious to a person having ordinary skill in the art that **US003198238 (Hughes)** would necessarily include a gas control valve for the reasons set forth herein above.

**Claims: Rejected under 35 U.S.C. 102(b)**

Claims **9** and **18** is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US005186620 (Hollingshead)**.

In regard to claims **9** and **18**, **US005186620 (Hollingshead)** shows a means for supplying gas including a mixing pipe (11), primary air inlet (15) and a flame holder (20) disposed at the outlet of the mixing pipe for separating the gas-air mixture into plural streams. The flame holder of **US005186620 (Hollingshead)** includes an annular hub having a center flame hole (30) and a plurality of outer wings corresponding to flame holes (31).

**Claims: Rejected under 35 U.S.C. 102(b)**

Claims **8** and **14** are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US005433602 (Sigler)**.

**US005433602 (Sigler)** shows a means for supplying gas including a gas nozzle (55), mixing pipe (21), primary air inlet (56) and a flame holder (20B; figure 9) disposed at the outlet of the mixing pipe for separating the gas-air mixture into plural streams. In regard to claim 3,

**US005433602 (Sigler)** also shows an annular hub having a center flame hole (50A, 50B) and a plurality of outer flame holes (53A, 53B) formed at a predetermined interval around the center flame hole; and a plurality of outer wings (84), radiating from said annular hub, at intervals corresponding to the interval of the outer flame holes of said annular hub. Regarding claims 2, albeit not shown or discussed, in order to ignite the flame of the **US005433602 (Sigler)** burner an igniter would necessarily be “disposed adjacent the outlet of the mixing pipe”, at least during ignition of the fuel-air mixture. Therefore, while not shown, **US005433602 (Sigler)** would either necessarily include an igniter and/or gas control valve, or it would have been obvious to a person having ordinary skill in the art that **US005433602 (Sigler)** would necessarily include an igniter and/or gas control valve for the reasons set forth herein above.

**Claims: Rejected under 35 U.S.C. 103**

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over **US000700714 (Bray)** in view of **US006190163 (MARICIC et al)**.

In the claims the term “laundry dryer” has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

In the claims the recitation “laundry dryer is deemed a recitation of the intended use. A recitation of the intended use a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

**US000700714 (Bray)** shows (Figures 1-5) and discloses gas burner flame holder including:

- a central hole (F) and a plurality of holes (E; figure 4) disposed at a periphery of the flame holder with a plurality of elongated fan shaped apertures (B; figures 4, 5) between the central hole and the plurality of hole; and
- a first face (not referenced; the upper face in figure 4) perpendicular to a fuel gas and air mixture tube (H) having a central flame hole (F) and inner periphery first (at G) and outer periphery second (not referenced) sidewalls perpendicular to the first face; and
- the flame holder includes an annular hub having a center flame hole (F) and a plurality of inward directed wings radiating from the center flame hole (F) (i.e.- any one of the radial projecting wall faces formed by grooves (G)).

**US000700714 (Bray)** acknowledges the use of an igniter associated with ignition of a mixture of fuel gas and air being supplied through the flame holder the flame holder. Note the following (page 1, lines 36-39):

“...free passage of the air and gas to the point of ignition after passing through the lower layer..”

**US000700714 (Bray)** disclose a burner and flame holder substantially as set forth in the claims with possible exception to:

- an igniter fitted to the outlet pf the tube; and
- the tube being a “mixing” tube.

**US006190163 (MARICIC et al)** teaches, form applicant's same premix gas burner field of endeavor, a gas burner including:

- a fuel nozzle (not shown; "... combustible gas is fed into the gas opening of the burner tube from the gas valve in a manner known to those skilled in the art") for receiving and spraying a fuel;
- a mixing tube (26) for mixing the gas sprayed from the gas nozzle and primary air;
- an igniter (48; "An igniter may be attached directly to the venturi tube in front of the outlet opening ...") fitted to an outlet side of the mixing tube for igniting the gas mixed with the primary air passed through the outlet of the mixing tube; and,
- a scoop (i.e. – concave) shaped flame holder (70; " The diverter is preferably in the shape of a scoop as shown in FIG. 5 for effective prevention of flame lifting") fitted to an outlet side of the mixing tube having flame holes (68) for making the gas mixed with the primary air to be split, and sprayed (see figures 4 and 5).

In regard to claims 20, it would have been obvious to a person having ordinary skill in the art to modify the fuel gas mixture tube of **US000700714 (Bray)** to be in the form of a venturi mixer, in view of the teaching of **US00619016 (MARICIC et al)**.

**Allowable Subject Matter**

Claims 4, 5, 6, 7, 10-13 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

See the attached PTO FORM 892 for prior art made of record and not relied upon and which are considered pertinent to applicant's disclosure.

**THIS ACTION IS MADE FINAL**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

**USPTO CUSTOMER CONTACT INFORMATION**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARL D. PRICE whose telephone number is (571) 272-4880. The examiner can normally be reached on Monday through Friday between 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



CARL D. PRICE  
Primary Examiner  
Art Unit 3749